

### **Remarks**

The Office Action is discussed in detail below. Support for amendments are found in the specification as filed. In particular support for new claim 60 is found on page 29, lines 18-23 as well as from Figure 13 of the specification as filed. No new matter has been added.

### **Claim Objections**

**Claims 9 and 15 are objected to because of informalities.**

Claims 9 and 15 have been canceled. Applicant requests that the objection be removed.

### **Claim Rejections-35 USC 112**

**Claim 10 is rejected under 35 USC 112, second paragraph.**

Claim 10 has been canceled. Applicant requests that the rejection be removed.

### **Claim Rejections 102**

**Claims 9-11 and 13-14 are rejected under 35 USC 102(e) as being anticipated by Wolstenholme et al (US 5,998,244).**

Claims 9-11 and 13-14 have been canceled. Applicant requests that the rejection be removed.

**Claim Rejections - 35 USC 103**

**Claim 15-17 and 19-20 are rejected under 35 USC 103(a) as being unpatentable over Wolstenholme et al (US 5,998,244) .**

Claims 15-17 and 19-20 have been canceled. Applicant requests that the rejection be removed.

**Claims 21-24,26-31,33-34 are rejected under 35 USC 103(a) as being unpatentable over Wolstenholme et al in view of Batra et al (US 6,242,781) .**

Claims 28-31, 33-34 have been canceled.

Applicant's independent claim 21 recites the following:

21. An electrically programmable memory element, comprising:

a first dielectric layer;

a first conductive layer formed over said first dielectric layer;

a second dielectric layer formed over said first conductive layer, said second dielectric layer having an opening therethrough to said first conductive layer;

a spacer disposed about a peripheral portion of said opening to form a pore;

a programmable resistance material disposed within said pore; and

a second conductive layer formed over said programmable resistance material.

Wolstenholme provides no teaching or suggestion of using a spacer about a peripheral portion of an opening to form a pore. Hence, Wolstenholme alone fails to teach or suggest all of the limitations of applicant's invention.

Batra has been cited to make up for the deficiencies of Wolstenholme. However, Batra is directed to a method of making an SRAM cell. Referring to Figure 9 of Batra, it is seen that Batra teaches the use of sidewall spacer 68 formed about the periphery of opening 62 to form a smaller opening 72. Batra teaches (see column 6, lines 55-63) that the smaller opening 72 is filled with a conductive material to form a pull-up resistor 34 for an SRAM cell. Batra provides no teaching or that a spacer may be used to define a pore for memory material of a programmable resistance memory element.

In order for references to be properly combined they must contain some teaching or suggestion of the proposed combination. As discussed, Wolsterholme provides no teaching or suggestion of using a spacer about the periphery of an opening to form a pore. Batra is directed

to SRAM cells and provides no teaching or suggestion of programmable resistance memory elements. Neither reference contains any teaching or suggestion that they be combined. Hence, the combination of these references is improper.

Claims 22-27 all depend from claim 21 and include all of the limitations of claim 21 as well as additional limitations. In view of the cancellation of claims 28-31, 33-34, and in view of the above remarks, the rejection of claims 21-24, 26-31, and 33-34 under 35 USC 103(a) is overcome and applicant requests it be removed.

**9. Claims 12 and 18 are rejected under 35 USC 103(a) as being unpatentable over Wolstenholm et al in view of Tanahashi (US 6,064,084).**

Claims 12 and 18 have been canceled. Applicant requests that the rejection be removed.

**10. Claims 25 and 32 are rejected under 35 USC 103(a) as being unpatentable over Wolstenholme et al and Batra et al as applied to claim (23,30) and further in view of Tanahashi (US 6,064,084).**

Claim 32 has been canceled. As noted above, Wolstenholme fails to teach or suggest all of the limitations of claim 21. In addition, as noted, Batra is directed to SRAM cells and provides no teaching or suggestion of programmable resistance materials or programmable resistance memory element made from such

materials and the combination of Batra with Wolstenholme was improper.

Tanahashi is directed to a DRAM cell and provides no teaching or suggestion of programmable resistance materials or programmable resistance memory elements using such materials. In addition, Tanahashi provides no teaching or suggestion of using a spacer about the periphery of an opening to form a pore. Tanahashi fails to make up for the deficiencies of Wolstenholme. Hence, the combination of Wolstenholme, Batra and Tanahashi still fails to teach the limitations of applicants claim 21. Claim 25 depends from claim 21 and includes all of the limitations of claim 21 as well as additional limitations. Hence, the rejection of claim 25 under 35 USC 103(a) as being unpatentable over Wolstenholme and Batra and further in view of Tanahashi is improper and applicant requests it be removed.



### SUMMARY

Claims 1-20, 28-59 have been cancelled. In view of the above remarks, claims 21-27 and claim 60 are in condition for allowance. Applicant respectfully requests withdrawal of the outstanding objections and rejection, and notification of allowance. Should the Examiner have any questions or suggestions regarding the prosecution of this application, he is asked to contact applicant's representative at the telephone number listed below.

Respectfully submitted,

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